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ABSTRACT

An electronic survey of a listserv discussion group, the Interdisciplinary Teamed Instruction (ITI) group, was conducted to learn more about the group and to explore surveying electronically. A 10-question survey was posted electronically, as were respondents' replies. Three reminders were posted over the 3-week reply period. The number of subscribers was estimated at 250 in the United States and 6 foreign countries. Twenty-three completed surveys were returned in the first 24 hours, and only 26 more were completed in the next 3 weeks, for a final response rate of 23.6%. Results suggest that the listserv is an active community of learners. They also demonstrate that defining the real population becomes a technological problem. If one were to hypothesize that an active electronic community would respond better than other groups to a survey, these results would not support the hypothesis, although respondents to the initial effort provided very rapid responses. The major implications of the research approach are: (1) to calculate an accurate response rate, it is crucial to determine the exact number of listserv subscribers before first posting the survey; and (2) more efforts should be put into an electronic survey before its first posting, such as announcements. The survey text is attached. (Contains 11 references.) (Author/SLD)

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ED 411 292

# E-Mail Survey of a Listserv Discussion Group: Lessons Learned from Surveying an Electronic Network of Learners

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## ABSTRACT

An electronic survey of the Interdisciplinary Teamed Instruction (ITI) listserv discussion group was conducted (1) to learn more from its members and (2) to explore surveying electronically. The perspective guiding this exploratory study was that, while there is a long and rich literature base for conducting mail and telephone surveys, there is little research and literature on conducting surveys electronically. Procedurally, a ten question survey was posted electronically and respondents' returns also were posted electronically. Three electronic reminders were posted over the three-week reply time period. The number of subscribers in the ITI listserv discussion group was estimated to be 250 in the United States and six foreign countries, although the exact number at the survey posting time is unknown because it was posted during March 1996 and the host agency compiles subscriber statistics on a monthly basis. Interestingly, 23 completed electronic surveys were returned in the first 24 hours. Just as interestingly, only 26 more were completed in the next three weeks for a total of 59, which yielded a return rate of 23.6%. The major conclusion from this electronic survey is that the ITI Listserv is a very active cyberspace community of learners, at least for those who responded to the survey. Three conclusions related to methodology were drawn. First, with the possibility of listserv discussion group participants subscribing and unsubscribing up to the minute the electronic survey is posted, defining the real population becomes more technological than with mail or telephone surveys. Second, if one were to hypothesize that an active electronic community of professional educators would respond better than other groups to a survey, the results of this study (24% return) would not support that hypothesis. Third, respondents in this initial effort provided much quicker replies to the electronic survey. The two major lessons learned from this study were: (1) to calculate an accurate response rate, it is crucial to determine the exact number of listserv subscribers immediately before the first posting of the electronic survey; and (2) more efforts should be put into a forthcoming electronic survey before its first posting, such as announcements, prenotices, etc.

## INTRODUCTION

Professional development of educators in the 1990s is undergoing a major change from prior decades. In the 1950s, 1960s, 1970s, and into the 1980s, professional development in the education field was a very "top-down," bureaucratic endeavor with somebody at the top deciding what the principals, teachers, and others in the school system lacked and then hiring an "expert" to fill that gap in knowledge -- typically in one or two "in-service days." Even the term "in-service" connoted mandatory attendance in a session or series of sessions led by an outside "expert" hired by the highest school district administrators. These experts -- typically university professors with pet theories or projects -- usually delivered their messages/instruction at large gatherings of educators. Most often, these in-service sessions were one-shot, awareness-level presentations with no provisions for follow-up or follow-through with the local school principals or teachers.

If we define professional development of educators to be purposeful efforts to improve educators' knowledge, attitudes, and skills related to achieving agreed upon district or school goals, then, truly, there has been a major movement away from the old "in-service" model for professional development to a contemporary model of personal choice for professional growth. In the contemporary model of professional development, individual principals or teachers choose areas to improve in their job based on their self-evaluations. Then, these individuals seek various means and/or mechanisms to address those needs, whether through formal university courses, special teacher workshops or institutes, or self-initiated study.

Professional development of educators in the 1990s can be characterized by its relevance to the job. That is, rather than theory-based presentations that may or may not be applicable to the job of the supervisor, principal, or teachers, the trend nowadays is that it must be connected to the work of the educators. Another important feature of present professional development is that "craft knowledge" or knowledge derived from the practice of working on the job is valued much more so than in the past. The experiences of being the principal or teacher every day on the job counts, and new knowledge is acquired on the job. Too, the perceived needs for professional development change over time as experience and knowledge are acquired. Thus, contemporary professional development for educators values the knowledge and experience acquired daily and melds them into a program of increased inquiry and steady improvement that should be reflected in increased school and student performance.

Four major models of professional development have emerged in the 1990s that reflect the features named above. The four major models of contemporary professional development are (1) action research groups, (2) peer assistance groups, (3) master or lead teacher, and (4) professional networks. The latter model is the subject of this exploratory study. Although such networks can include visits to others in their work setting to share ideas, experiences, and new skills, this study deals solely with electronic networking of educators. The view here is that electronic networking of educators with a similar focus can become a viable community of learners who share successful practices, provide needed support, and engage in reflective dialogue. This study is about the

Interdisciplinary Teamed Instruction (ITI) listserv discussion group established by the Appalachia Educational Laboratory (AEL).

**Interdisciplinary Teamed Instruction**

The ITI project (1992-1994) was a two-year research and development project aimed at determining the effects of interdisciplinary teamed instruction on teaching and learning. The study also sought to validate the effectiveness of a professional development model that would facilitate development, implementation, and evaluation of ITI. Through summer institutes and on-site workshops, project staff provided training, resources, and ongoing technical assistance to teams of teachers and administrators from four rural Virginia secondary schools. These teams designed and tested integrated curricula that incorporated learning activities and alternative forms of assessment; engaged in collaborative action research to determine the effectiveness of units; and redesigned units using data-based feedback from students, teachers, parents, and supervisors.

Program participants reported positive effects of ITI on teaching at the four sites, particularly in terms of professional growth, reflective practice, and collegial interaction. They also reported positive effects of ITI on student attitudes and performance, particularly for lower-achieving students; rated the project's professional development model as highly effective; and described conditions that enhanced successful ITI implementation (Burns, 1994).

Participants made two recommendations based on these conditions. (1) Before ITI is implemented, school faculty and community should (a) learn about ITI concepts, processes, and conditions; and (b) determine their readiness and desire to begin ITI. (2) AEL should develop resources to support ITI implementation.

In response to these recommendations, Rebecca Burns, the ITI project director, wrote *Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1995a)*. This book, with *Facilitator's Guide (1995b)*, is a professional development tool designed to increase a faculty's understanding of curriculum integration and to assist them with decision-making about ITI implementation. Since the spring of 1995, AEL staff have conducted 25 *Dissolving the Boundaries* professional development sessions in nine states. Additionally, the book is used by schools, districts, and colleges in 37 states.

To assist schools that are ready to implement ITI, five summer institutes were held between June 1995 and August 1996 to prepare teams of teachers and administrators from 24 schools, representing five states, to design and implement ITI.

## The ITI Listserv

To provide continuing support to schools that are exploring or implementing ITI, AEL initiated a professional electronic network, *iti@ael.org*, in July 1995. To promote membership in the listserv, co-moderator Douglas Fleming announced it on a number of other electronic networks to which he subscribes. Rebecca Burns, listserv owner/moderator, designed a written announcement with a description of the listserv's purpose and subscribing directions that she, Fleming, and other AEL staff distributed at conferences and workshops. A copy of this announcement is also included in the front pocket of *the Dissolving the Boundaries* notebook.

The ITI listserv is a moderated, electronic forum for sharing questions, insights, experiences, and resources related to ITI. Anyone with Internet access may subscribe to the list free of charge. Co-moderators Burns and Fleming keep discussions focused on ITI by providing stimulating messages, thought-provoking questions, descriptions of resources, and suggestions that assist participants with questions and issues related to ITI. The ITI listserv is an active forum that may exchange 20 or more messages in a 24-hour period. Conversation strands tend to have depth, with multiple subscribers replying to a query, request, or explanation.

## Related Studies

While there is a long and rich literature base for the conduct of mail and telephone surveys, there is little research and literature on conducting surveys electronically. For example, Green and Hutchinson (1996) synthesized the literature on mail and telephone research studies with their excellent quantitative data meta-analysis and Boser and Clark (1996) conducted a similar meta-analysis for qualitative data. Several studies employing electronic means are summarized below.

Clark and Snowdon (1996) used several electronic means (plus traditional mail and Fax) to conduct a qualitative study of Illinois extension agents in a short two-week period. The survey consisted of six constructed-response questions and one selected-response question. The extension staff (number not reported) were given the choice of responding via the wide area network or by traditional mail. A few chose to respond via E-mail, although that option was not part of the original data collection package. The response was "about one-third," and the authors noted that they typically obtain 75-95% response rates when using mail or phone only methods. With electronic data collection, each respondent entered his/her own data for analysis. This resulted in much longer responses than from typical mail questionnaires, confirming the results reported by Mehta and Sivadas (1995). The results led Clark and Snowden to conclude that electronic surveys provide researchers with a *different* approach to data collection and expands available techniques (emphasis in original). They concluded that electronic data collection presents unique characteristics and is not just a new way to do what was done in the past.

Reeves, Laffey, and Marlino (1996) reported on the development, implementation, and evaluation of new approaches to cognitive assessment within an undergraduate engineering course

at the U.S. Air Force Academy. The "Introduction to Engineering" course for freshmen was taught by a new project-oriented environment and assessed by seven different techniques--one being E-mail journals maintained by the students. The authors assessed the students' E-mail journals at the end of each module and at the end of the course, with an E-mail survey. There were 42 freshmen in the required course. Specifically related to the instant study, the authors reported response rates between 76-88% by the engineering course students.

Preskill and Caracelli (1996) presented the results of their large survey of professional evaluators in the American Association (AEA). As part of the AEA's tenth anniversity, a three-part, 13-page survey was mailed to all North American AEA members who belonged to the Evaluation Use Topical Interest Group (TIG). These 526 members constitute just over 25% of the AEA membership. The original survey was planned to be mailed only, but an opportunity to conduct an electronic survey arose during the time period (May-June 1996). To describe the electronic surveying experience, we present their account of it here.

> As one method to stimulate the response rate, we posted a reminder on AEA's EVALTALK listserv. As a result, one AEA member, Michele Walsh, volunteered to reformat the survey and put it on-line with the idea that TIG members could respond on-line or by mail. Doing this created a fair amount of discussion by listserv members who saw the survey. The result was *only twelve responses* via this electronic medium. And, of these twelve, only one respondent was a TIG member. The findings reported in this paper included only the one TIG member's responses. Due to such a low on-line response rate, we did not compare the on-line data with the mailed data, nor did we use any data that wasn't from TIG members (emphasis added).

Holt, Kleiber, and Swenson (1995) conducted an online evaluation of an electronic graduate class forum that was conducted for students in two widely-separated colleges (Georgia and New York). The students were "volunteered" to participate in the electronic forum by their instructors. The electronic survey at the end of the course was one type of evaluation, there also were more traditional mail questionnaires and reflective journals completed. There was a total of 20 students in the forum, 15 at one college and 5 at the other. In conducting the E-mail survey of the students, they were advised that they could choose to maintain their anonymity by sending their response to a different site, where it would be printed and mailed to the course instructors. The E-mail survey consisted of nine items of which all but one were the constructed-response type. Only four of the 20 course participants in the electronic forum chose to respond online to the E-mail survey. This was a response rate of 20%. The four respondents to the electronic survey did report reading between 65-100% of the postings in the forum.

Foster (1994) described a trial of a method of data gathering using electronic mail over international computer networks. The topic of his efforts was how instructors revise their courses. He conducted interviews rather than a short-answer survey in his first effort. Foster felt that electronic interviewing offered several advantages over face-to-face interviewing including reduction in transcription labor, data ready for analyses with contemporary qualitative software programs, and

the widening of the geographic scope for the interviews. He sent the interview electronically to several listservs, advising members to respond just to him so as not to clog up the computers of others. Some responses were received, but less than the author hoped for. In his next trial, Foster posted his interview, now converted to be a questionnaire in survey form, to a listserv run by the American Educational Research Association. He describes its first three replies as: "one polite refusal to respond; one filled out survey; and one somewhat heated objection to the list server being used for surveys (pg. 95)." Foster concluded that electronic means can be a useful supplement to other forms of data collection; it can transcend distance and working schedules; and it has potential advantages of cost, time, and convenience. However, he also concluded that electronic interviews may not be as flexible as face-to-face interviews, precautions are necessary to stay within "net etiquette," and the question of precisely describing the target audiences is not fully answered yet.

**Objectives of This Study**

There were two main purposes for conducting this study. The first purpose of the ITI Listserv Electronic Survey was to identify the nature of the members in the group, learn what services were liked and used most, and discover what services should be planned. Specifically, the five objectives of this purpose were:

1. to identify the names, mailing addresses, and professional roles of members of the ITI listserv,

2. to discover how the ITI listserv members found out about the group and how often they check into it,

3. to learn what kind of ITI listserv messages are most/least helpful and what other activities should be explored,

4. to discover if there is any interest in a focused class/seminar on ITI, what level it should be, and what topics should be explored; and

5. to learn how the ITI listserv has been used by participants in their jobs.

The second purpose of this study was to assess how an electronic survey can serve as a method for gathering data. The use of electronic means for communicating and networking is expanding rapidly. For example, within AEL, three other listservs were in the planning stages when this study was conducted. The popularity, convenience, and the possibility for immediate replies are desirable features of electronic communicating. However, little has been studied and reported regarding electronic surveys. So, one purpose of this study was to complete an electronic survey and draw conclusions from the effort to inform others in AEL and in other organizations.

**Audience for This Report**

The primary audience for this report of the ITI listserv survey is the staff of the AEL Scaling Up R & D Project. This report is seen as a formative evaluation of a new activity in the scaling-up project. As such, it is expected to be useful for providing staff with new information for decision-making regarding the ITI listserv activity. Secondary audiences would include survey researchers interested in the methodology employed in this study and others interested in electronic networking of professional educators.

## METHODOLOGY

This section presents the ITI listserv population and sample the electronic survey used to collect the data, the procedures used in completing the study, and the data analysis procedures.

### ITI Listserv Population and Study Sample

The population for this study included all those persons who were subscribers to the ITI listserv *(iti@ael.org)* on the date the electronic survey was posted. Inspection of the electronic records indicates that there were 250 subscribers to the ITI listserv on February 28, 1996, the month before the survey was posted for the first time. Educators can subscribe and unsubscribe to the listserv at any time, day or night. Since the listserv record keeping is by month, there is no way of knowing exactly how many subscribers there were on March 25, 1996, the day the ITI survey was posted.

The sample for this study included all those persons who completed and returned the ITI Listserv Electronic Survey by the closing date. Since one objective of this study (#1) was learning exactly who members of the group were and their professional roles, much of the descriptive information is presented in the Findings section. The sample of the ITI survey respondents included educators in 29 states and 3 foreign countries and the majority (56%) were teachers.

### Electronic Survey

The ITI Listserv Electronic Survey was developed by AEL staff members Rebecca Burns and Merrill Meehan with the assistance of consultant Douglas Fleming. Fleming, a consultant to the ITI project, has helped deliver the ITI summer training institutes for three years and has assisted with the ITI listserv development. Based on an initial discussion with Burns, Meehan developed a rough draft of the electronic survey. Burns refined this first draft and forwarded it to Fleming for reviewing. His reactions/suggestions were sent to Meehan, who developed the second draft of the survey. Both Burns and Fleming reviewed the second draft, made suggestions for improvement, and provided them to Meehan. A third draft was prepared, reviewed, and refined into the fourth and final version of the ITI Listserv Electronic Survey. This survey development process began in the last week of January 1996 and was completed in the third week of March 1996.

The ITI Listserv Electronic Survey was designed purposefully to be short and easy to complete, as this was an exploratory study and the first study of the ITI listserv group. The final form of the electronic survey consisted of eight numbered questions, although two questions (#5 and #7) included subparts, yielding 11 actual questions. Most of the 11 questions solicited type-in, constructed responses. The three exceptions were questions #4 (which solicited a number), #7 (which solicited a yes or no response), and #7a (which solicited a check of one of four responses

provided). Survey questions were related to each objective in the study. More specifically, questions #1 and #2 addressed objective number 1; questions #3 and #4 addressed objective number 2; questions #5 and #6 addressed objective number 3; questions #7, #7a, and #7b addressed objective number 4; and question #8 addressed objective number 5.

Appendix A is a paper version of the ITI Listserv Electronic Survey before it was posted to the ITI listserv group. In its electronic format, the survey was designed to increase the response rate.

**Procedures**

The administration of the ITI Listserv Electronic Survey was completed in the three-week period from March 25 through April 15, 1996. The administration of the survey was completed totally via electronic means. The U.S. Postal Service, commercial letter and package carriers, and telephone lines (e.g., phone calls or faxes) were not used in this study. The survey was posted to the ITI listserv group and members responded with the reply feature on their computers.

The ITI survey was posted first on March 25; there were no prenotification messages. This first posting included a short set of instructions that briefly explained the purpose of the survey, the E-mail address of the ITI listserv moderator, directions for using the reply feature for returning the survey, and a thank you to survey completers. Directly under these instructions were the eight numbered survey questions, including the subparts to questions #5 and #7. After the last question, another thank you and directions for returning the survey to the listserv moderator at her E-mail address were provided. The screen concluded with Burns' mailing address, phone number, and fax number; however, as noted above, no surveys were returned using those means as this was solely an electronic survey.

The day after the ITI survey was posted for the first time, Burns posted a three-paragraph note to the full listserv group. In the first paragraph she thanked those who already completed and returned their survey electronically to her. She noted that 23 surveys were returned in the first 24 hours since the initial posting. In the second paragraph, Burns again requested non-completers to return their surveys. She provided several examples of how the responses would be used to serve the group better. Also, in this paragraph, she provided some of the suggestions for discussion group improvements in the completed surveys. The third paragraph said that she would analyze and summarize the surveys and report back to the full group as soon as possible.

On April 1, one week after the initial posting of the ITI survey, Burns posted another three-paragraph reminder message to the full listserv group. She noted in the first paragraph that 43 electronic surveys had been completed and returned as of that date. She again stated how important it was to receive more surveys for her funding source to "know what we are doing, how well we are doing, and who we are serving" (R. Burns, unpublished E-mail message, April 1996). The second paragraph acknowledged that some members of the ITI group were on spring break, but Burns requested that non-completers return the survey when they returned. Too, she gently chided some

frequent ITI discussants who had not returned their surveys. The third paragraph included a thank you to all for the active participation in the ITI listserv.

The fourth and final posting regarding the ITI electronic survey was on April 11. Essentially, this posting was a repeat of the full ITI Listserv Electronic Survey initially posted on March 25. Burns included a final plea for returned surveys from non-completers just before the instructions section. Also, she addressed this last posting to new members of the listserv group who subscribed after the previous messages and the first survey. This last posting indicated that data entry would be starting.

The ITI electronic surveys were collected up to April 15. By that date, there were 59 completed and returned surveys out of the estimated population of 250 members in the listserv. Thus, the return rate was 23.6% of the population at the start of the survey. The 59 completed ITI surveys were assembled for the next stage of data analysis, which is described in the following subsection.

**Data Analyses**

The analyses of the data from the 59 completed ITI electronic surveys were completed by the co-authors at AEL in Charleston, West Virginia.

Analysis of the data from the 11 survey questions (counting subparts to two numbered questions) was rather straightforward. Two databases were created for the survey data, one for data to be analyzed statistically and one for information from the constructed-response questions to be analyzed by categorization procedures. Relative to the statistical database, first the completed surveys were inspected visually to devise the different position roles or job names (question #2), the different categories of responses to asking how the respondent found out about the ITI listserv (question #3), and how many times members check in per week (question #4). Next, an SPSS file was created and the raw data from questions #2, #3, #4, #7, and #7a were entered and saved. Regarding the constructed-response database, the respondents' typed-in replies to questions #1, #5 (two subparts), #6, #7b, and #8 were entered into a WordPerfect file by question number.

Actual data analyses tasks were split between the co-authors, with cross-checks provided by the other co-author. Meehan analyzed the statistical database using SPSS-PC+ software. Here, simple frequencies and bar charts were completed for questions #2, #3, #4, #7, and #7a. When completed, the co-authors met and discussed the SPSS-PC+ printout in terms of the findings and what they mean for the conclusions and recommendations of the study. Burns analyzed the WordPerfect file of typed-in responses to learn the locations of ITI listserv members in question #1 and then to construct categories of responses supplied to questions #5, #6, #7b, and #8. When these categories were developed, the co-authors met to review them and agree to their logical bases, then to discuss these findings and their input to the conclusions and recommendations. It should be noted that some typed-in responses were longer than others, but the coding was completed on the basis of the dominant theme expressed in the response.

## FINDINGS

This section presents the findings from the administration of the ITI Listserv Electronic Survey in March/April 1996. These findings are organized by the five objectives of the survey, in order. Originally, the authors of this paper proposed to eliminate the ITI-specific findings from the listserv survey, but two of the three reviewers commented that the findings would be helpful to understand the methodological conclusions; therefore, they are presented here.

### Location and Roles of ITI Listserv Members

Question #1, soliciting members' names and mailing addresses, revealed that the 59 survey respondents lived in 29 states and 3 foreign countries (Brazil, Israel, and Canada). All major regions of the United States were represented by the ITI listserv members.

Question #2 solicited the name of the respondent's professional role or job. Inspection of the typed-in responses led to 13 different categories with at least one response, including a category for "Other." The high school teacher category had the most responses with 16 (27.1%). The second largest category of professional role or job was teacher-- unknown level with 9 (15.3%) responses. The third largest category was middle school level teacher with 7 (11.9%) responses, while the fourth was higher education with 6 (10.2%) responses. The remaining eight categories had four or less responses. Those categories were central office staff (4, 6.8%); other (4, 6.8%); high school principal (3, 5.1%); state department of education (3, 5.1%); middle school level principal (2, 3.4%); other Regional Educational Laboratory (2, 3.4%); principal at unknown level (2, 3.4%); and elementary level teacher (1, 1.7%).

Combining similar professional role responses produces interesting results. For example, combining all the teacher responses (elementary, middle school, high school, and unknown level) yields a total of 33 or 55.9% of the ITI survey respondents. Combining all the principal responses (middle school, high school, and unknown) yields a total of 7 or 11.9% of the survey respondents. Then, adding in the central office staff responses (N = 4) to those of teachers (N = 33) and principals (N = 7) produces a total of 44 or 74.6% of the ITI electronic survey respondents who had roles or jobs at the local education agency (LEA) level. The higher education role responses, at 6 for 10.2%, was the next largest employer group.

### Discovery and Activityness of ITI Listserv

Question #3 was: "Please tell us how you found out about *iti@ael.org*." Fifty-five of the 59 respondents answered this question. Inspection of the typed-in replies led to the development of eight different categories. Of the valid responses, 27 or 49.1% replied that they found out about the ITI listserv from another listserv. The second highest category was through the Internet with 12 (21.8%)

responses. The third highest category was discovery through a colleague with 8 (14.5%) responses. The four remaining categories, in descending order, were Doug Fleming (3, 5.5%), an ITI event (2, 3.6%), a non-ITI conference (1, 1.8%), and another user (1, 1.8%).

Interestingly, it was ITI consultant Doug Fleming who put the ITI listserv information up to the other listservs, so, combining the "another listserv" category (N = 27) with the "Doug Fleming" category (N = 3) produces 30 of the 55 valid responses, or 54.5%, directly attributed to Fleming.

Question #4 asked: "On average, how many times per week do you check into *iti@ael.org*?" Fifty-five of the 59 respondents provided a number for this question. Inspection of the responses led to placing them into five categories of 1-5 times, 6-10 times, 11-15 times, 16-20 times, and more than 21 times per week. The largest category of replies was 1-5 times per week with 27 responses, or 49.1% of the valid replies. The second largest category was 6-10 times per week with 18 (32.7%). Third highest was more than 21 times per week with 4 (7.3%), followed by 11-15 times per week with 3 (5.5%), and last was 16-20 times with 2 (3.6%).

Thus, regarding how active the ITI listserv members reported being with the electronic community of learners, almost half said they checked in between 1 and 5 times per week and another third of the group said they checked in between 6 and 10 times per week. Too, another 7.3% said they were active with the ITI listserv more than 21 times per week, on average.

**Most/Least Helpful Messages and Activities Wanted**

Question #5 on the ITI survey contained two parts, both constructed-response type. The first part asked, "What kinds of message on our listserv do you find most helpful to you?" The second part asked, "Which are least helpful to you?" Responses to each part of the fifth question are presented next.

In terms of the typed-in responses to the most helpful messages, the survey completers provided 56 codable responses. Inspection of the replies from the respondents revealed that they all fit into one large category. Survey respondents indicated overwhelmingly that listserv messages related to integrated curriculum and instructional practices -- particularly those that provided descriptions of actual work being done by teachers -- were the most helpful. One respondent summed up the "most helpful messages" well: "I enjoy both the theoretical and practical discussion and find both useful in different ways -- the theoretical to make me think and the practical to actually put into use in the classroom."

Regarding the second part of the fifth question, survey respondents offered few replies about what listserv messages were least helpful. In fact, only 42 responses were typed in. Most of these responses were positive in nature, such as, "[I] liked them all," or "[I] got something from most messages." However, some survey completers indicated that "long posts," those "unrelated to integration," or "personal notes and chit chat" were least well received.

Questions #6 was: "What other type(s) of activities or approaches would you like us to try out?" ITI survey completers provided 42 coded responses to this question. Inspection of these responses led to four categories. The majority (20, 47.6%) of the coded segments of other listserv activities/approaches dealt with immediate application or transfer to the classroom. As examples, replies included: "more sharing of plans to use in the classroom," "compile a database of tried and true teaching ideas that others could access," and "online seminar or course with examples of integrated curriculum." One interesting suggestion was: "How about being able to post curriculum in process for feedback from the list[serv]?" Another category of responses (6, 14.3%) dealt with suggestions for listserv organization. Examples in this category included archiving messages to a Web site and subdividing the group into different "chat groups" (e.g, those interested in ITI at the high school level).

A third category (5, 11.9%) included suggestions for summaries and/or reviews. Examples in this category included book reviews or reports that "summarize practice, policy, and/or philosophy at many schools" or "research updates and literature reviews." The remaining responses (11, 26.2%) were statements of satisfaction with "things as they are." One respondent said, "I value all discussion on the listserv." Other comments included "It's nice to pick and choose from a variety of 'threads' that occur" and "I'm still getting used to this format for exchanging ideas."

**Interest in a Focused ITI Class/Seminar**

Question #7 consisted of three parts. The first part asked if the respondent was interested in "a small class/group/or seminar on ITI to be conducted on a dedicated listserv." Fifty-two of the 59 respondents answered this question, with 42 (80.8%) checking the Yes response and 10 (19.2%) checking the No response.

The second part of the question (#7a) was: "If yes to #7, what level for the class most interests you? (check one)." The four options to check were "Continuing education/professional development," "Graduate credit level," "Personal audit," and "Other (describe _____)." Thirty-four of the 59 respondents (eight less than checked Yes to #7) checked one of the four options. The largest category of responses was "Personal audit" with 15 (44.1%) checks. The second largest category of "Continuing education/professional development" was very close to the largest category with 14 (41.2%). The third largest category was "Graduate credit level" with 4 (11.8%) responses, while the fourth category was "Other" with just 1 (2.9%) response.

Thus, of those respondents who checked what level they would prefer for an ITI class/seminar on a dedicated listserv, they were about equally split between continuing education or personal audit with much less interest in graduate level credit.

The third part of this question (#7b) was: "If yes to #7, what areas/topics would you like to investigate? Please name them below." Thirty-nine responses were provided by the ITI electronic survey respondents. All of the suggested topics for an online ITI class were related to the "how-to's"

of curriculum integration. However, the responses fit into the two categories of general and specific. Some of general category responses (17, 43.6%) included "development of ITI units," "team building ups and downs," "models for instructional design," and "issues on planning courses on curriculum integration within teacher education programs." Other topics named (39, 56.4%) were a little more specific, but nevertheless related to the implementation of ITI. Examples of these more specific responses included "assessment tools for integrated projects," "social studies/English/arts integration at the high school," and "integration strategies for freshman."

**On-the-Job Uses of ITI Listserv**

Question #8 was the last and longest question on the ITI survey. This question was: "Please describe how you have used our listserv in your work. Provide any examples, incidents, contacts, resources located, or other examples of how our listserv was useful to you."

Fifty-five (93.2%) of the 59 survey completers replied to this eighth question. All 55 respondents described how they have used the ITI listserv in their work. These descriptions were divided into two main categories: (1) sharing or passing along messages to others and (2) personal development. In terms of the first category, 29 (52.7%) replies described how respondents shared ITI listserv messages with others such as students, parents, colleagues, or supervisors. For example, one teacher said she regularly tacks ITI message printouts on the faculty bulletin board in her school and a principal said, "I often share thought-probing exchanges with my teachers."

Regarding the second category of personal development, 26 (47.3%) responses were provided. Examples of replies in this category included "guide my thinking and provide me with invaluable resources," "increasing my awareness of innovative practices," and "ideas for personal research and essential questions to frame and develop my school's program."

Conclusions, discussion, and recommendations drawn from these ITI survey findings are presented in the next section.

## CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Conclusions and recommendations drawn from the ITI electronic survey are presented in this section. These conclusions and recommendations are not presented in any priority; rather, they are presented as they emerged from the data. As appropriate discussions accompany the conclusions.

### Conclusions

One conclusion drawn from this study of the ITI listserv group is that the concept of "community" should be expanded to include cyberspace. That is, community is not so much a physical "place" in which events must occur as it is the experience itself. This study of the ITI listserv showed that a community can exist in cyberspace. Given the responses to this ITI survey, we can think of this group as a cyber-community. This is evidenced by the fact that respondents from at least 29 states and 3 foreign countries participate in the ITI listserv.

Another conclusion from this electronic survey is that the ITI listserv is made up largely (75%) of local education agency staff and they like what they are getting now. The most helpful listserv messages related to integrated curriculum and instruction and most particularly those that included descriptions of actual work in this area being completed by teachers. Even when asked to name the least helpful messages, respondents used that space to say that most messages were helpful and only a very few replied with least helpful messages.

We conclude from this study that the ITI listserv group is very active. Data show 7% of survey respondents check into the listserv more than 21 times per week, one third check in between 6 and 10 times, and half do so between 1 and 5 times per week. However, this conclusion is based solely on actual respondents to the survey. We do not know how often survey nonrespondents check into the listserv. In fact, some nonresponse may be due to ITI listserv members not being aware of the survey due to their infrequent use.

The contribution of consultant Doug Fleming to the ITI listserv has been very important to its success. First, we discovered that 55% of the survey respondents either learned about the AEL ITI listserv directly from Fleming or from other listservs to which he provided contact and subscription information. Second, Fleming's contributions to the moderation of the discussion were acknowledged by respondents. For example, one respondent wrote, "I especially like Doug's stimulating questions."

Next, we conclude from the data that there is interest in an online class regarding ITI, but not for graduate credits. Approximately 80% responded positively to the idea of an online class about ITI on a dedicated listserv. When asked at what level for that class they were interested, the two top categories checked were personal audit and professional development, accounting for 85% of all the

responses. Also, we conclude from the data that all of the suggested topics for such an online class related to practical "how-to's" of curriculum integration.

If we can define a community of learners for educators as including the sharing of their values and beliefs about improving instruction for their students, engaging in reflective dialogue about teaching and learning, and discussing implications for their professional practices; then we conclude that the ITI listserv is helping to create a community of learners, according to survey responses.

Last, three conclusions related to the methodology were drawn from the ITI electronic survey. First, with the possibility of listserv clients subscribing and unsubscribing up to the minute the electronic survey is posted, defining the population becomes more technological than with mail or telephone surveys. This study posted the survey during the month, while the listserv host agency compiled subscriber statistics on a monthly basis. So, special subscriber statistics must be obtained if an electronic survey is posted during the month. Too, the problem of identifying the population accurately might be decreased as the stability of the user population increases. This may be a function of time and listserv group maturity.

Second, if one were to hypothesize that an active, electronic community of professional educators would respond better than other groups to a survey (a rather simple one, at that), these ITI survey results would not support that hypothesis. With a return rate of 23.6%, the survey showed electronically connected participants to respond similary to many other groups in terms of their overall response rate. This low response rate raises a question about the validity of the data for generalizing to the entire ITI listserv discussion group. Until more research is conducted via this electronic method, this study also raises some questions about its adequacy for data collection in order to generalize to the full listserv membership. Recall, the time period was a rather short three weeks and no prenotifications were provided. As one reviewer correctly pointed out, if the survey were repeated with a different listserv group, a completely different response pattern might be obtained. We don't know. However, we do note that the response rate in this study was very similar to that of most of the other studies reviewed (the exception being a requirement of a freshman engineering class at the U.S. Air Force Academy). Too, it is quite possible that the ITI listserv discussion group recognized the electronic survey as being different than their typical discussions of interdisciplinary teamed instruction and chose not to participate in the survey. This hypothesis could be supported by the fact that 75% of the respondents were local education staff, primarily teachers, who have very little time during the school day for any activity beyond their required duties. Also, because most participants found listserv messages related to integrated curriculum and instructional practices most helpful, the survey was seen as less helpful. Perhaps some participants were turned off by a survey of themselves rather than discussion of teaching and learning.

Moreover, anonymity is a characteristic of most listservs. This is true of *iti@ael.org* although efforts are made by the moderators to encourage participants to introduce themselves and to engage in online discussions. For example, the welcome message new subscribers automatically receive invites them to introduce themselves and share their experiences with curriculum integration. Periodically, the moderators send messages to the list encouraging participants to share ideas and

information on specific topics. Also, Burns, the listserv owner, checks the user list at least monthly to identify new subscribers. She then posts a message indicating the number of new users and inviting them to introduce themselves and join the discussions, or she sends each new subscriber a personal E-mail message welcoming them and inviting their participation. With all these efforts to promote introduction, many users remain anonymous and do not participate in listserv conversations.

An interesting note on this topic: occasionally "anonymous" users correspond by personal E-mail with the moderators or with other users. From these messages, as well as from survey data, we have learned that the absence of online comment does not necessarily indicate lack of use. In fact, at least half of the survey respondents were not active in online discussions, and some had never posted a message to the listserv. However, many participants tell us that they print and share listserv conversations and information with others, even though they don't participate in the online discussions. Various reasons have been given for their "online anonymity," including statements such as "I don't feel I have much to contribute," to "I'd like to respond to conversations, but I don't have time."

Third, however, electronic respondents (in this study, at least) provide *much quicker* replies. In this effort, 23 of the 59 completed surveys (39%) were returned *within the first 24 hours* of the first posting. The immediate accessibility to the potential respondents is one apparent advantage of the electronic survey, but only if the respondents avail themselves of the opportunity. If they didn't, the situation would be comparable to a respondent of a mailed questionnaire not opening the letter or reading the questionnaire itself. In a similar vein, the method for responding to an electronic survey must be quick and simple enough for the respondent to complete. We don't know from this study if the reply method was one reason for the quick response by about half of the total respondents or not. This has implications for future electronic surveys.

**Recommendations**

One obvious recommendation from this study would be to continue operating the ITI listserv. Certainly, this cyberspace community is meeting the needs of a dedicated and active group of educators across the United States and several foreign countries. Closely related to this is the recommendation that the implementation of the AEL ITI listserv continue to focus on practical, classroom-oriented topics. With three-fourths of the group being employed at the local education agency level, it is very important to provide discussion topics that meet local educators' needs. Too, the very active nature of this listserv group shows that weekly contacts/stimulation by the moderator are required.

A second conclusion would be to continue to utilize the services of ITI consultant Doug Fleming. His contributions toward obtaining new ITI listserv subscribers, plus his contributions to the ongoing discussions regarding integrated curriculum and instruction, were made clear in this study.

There is enough interest in a separate online class on ITI that the moderator of this group should pursue it in the near future. We recommend a pilot test of a small class/seminar on ITI on a dedicated listserv that focuses on practical, how-to-do-its of curriculum and instruction integration. Also, the pilot ITI class/seminar should be geared to continuing education and personal audit-type needs and *not* toward providing graduate course credits.

Somewhat related to the prior recommendation is the call for the ITI discussion to *not* get so focused on practical, everyday issues as to lose sight of the fact that to maintain its position as a professional community of educators, the group also must discuss other issues or, at least, weave these other types of issues into the discussions. Here, we are talking about the fact that the ITI listserv group must continue to discuss their values and beliefs about improving instruction for their students. Too, the group members should continue to engage in thoughtful, reflective dialogue regarding teaching/learning situations. Last, ITI group members should continue to be stimulated to discuss their own professional practices and how ITI topics have affected (or not affected) those practices. If the ITI listserv is able to stimulate discussions that include these types of important issues, then we can say that the group is an electronic community of learners. If discussion about these types of topics starts to fall off or, worst case scenario, is abandoned completely, the group probably will become less of a community of learners, according to our definition.

The last recommendations of this study relate to its methodology. From this study we learned that an electronically connected group of educators responds about the same to an electronic survey as do some other groups when they respond to a mail or telephone survey. However, one major lesson learned in this study was that electronic respondents reply *much quicker* to the initial posting of the survey. Thus, the recommendations to other listserv surveyors is to put more effort into the upcoming electronic survey *before* its first posting. Based on this study, the implementation of more prenotifications (announcements, notices, teasers, etc.) should yield a larger number of immediate survey returns. A related recommendation would be to determine the actual number of listserv subscribers immediately before the first posting of the electronic survey in order to establish the correct number in the population.

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**Appendix**

**ITI Listserv Electronic Survey**

## ITI Listserve Electronic Survey

**Instructions:** To help us document **iti@ael.org** services for our funding source and also to help us know what services you would like us to plan, please complete this electronic survey as soon as possible and return to **burnsb@ael.org**. Make it easy on yourself! Use your reply feature. Thanks in advance.

1. What is your name and official mailing address? (Snail mail address)

2. What is the name of your professional role or job?

3. Please tell us how you found out about **iti@ael.org**.

4. On average, how many times per week do you check into **iti@ael.org**?

   _____times per week, on average.

5. What kind of messages on our Listserve do you find most helpful to you? Which are least helpful to you?

   Most =

   Least =

6. What other type(s) of activities or approaches would you like us to try out?

7. We are thinking of developing and conducting a small class/group/or seminar on ITI to be conducted on a dedicated Listserve. Do you have an interest in such an activity?

_____Yes _____ No

a. If yes to #7, what level for the class most interests you?
(check one)
_____ Continuing education/professional development
_____ Graduate credit level
_____ Personal audit
_____ Other (describe_____)

b. If yes to #7, what areas/topics would you like to investigate?
Please name them below.

8. Please describe how you have used our Listserve in your work. Provide any examples, incidents, contacts, resources located, or other examples of how our Listserve was useful to you.

Thank you for completing this electronic questionnaire and returning it to **burnsb@ael.org**. Your interest in our service is appreciated.